

**UNITED STATES DISTRICT COURT
DISTRICT OF MINNESOTA**

Field Hybrids, LLC,

Plaintiff,

v.

Toyota Motor Corp., and Toyota Motor
Sales, U.S.A., Inc.,

Defendants.

Toyota Motor Corp., and Toyota Motor
Sales, U.S.A., Inc.,

Counterclaim Plaintiffs,

v.

Field Hybrids, LLC, Bruce F. Field, and
Spencer E. Adler,

Counterclaim Defendants.

**MEMORANDUM OPINION
AND ORDER**

Civil No. 03-4121 ADM/JSM

Mark E. Ferguson, Esq., and Sean W. Gallagher, Esq., Bartlit, Beck, Herman, Palenchar & Scott, LLP, Chicago, IL, and Ann N. Cathcart Chaplin, Esq., Fish & Richardson P.C., P.A., Minneapolis, MN, appeared for and on behalf of Field Hybrids, LLC, Bruce F. Field, and Spencer E. Adler.

John W. O'Meara, Esq., and James A. Oliff, Esq., Oliff & Berridge, PLC, Alexandria, VA, and Cynthia A. Bremer, Esq., and Barbara Jean D'Aquila, Esq., Flynn, Gaskins & Bennett, LLP, Minneapolis, MN, appeared for and on behalf of Toyota Motor Corp. and Toyota Motor Sales, U.S.A., Inc.

I. INTRODUCTION

On December 7, 2004, oral argument before the undersigned United States District Judge was heard on Toyota Motor Corp. and Toyota Motor Sales, U.S.A., Inc.'s ("Toyota") Motions

for Summary Judgment [Docket Nos. 132 and 139]. First, Toyota claims Field Hybrids abandoned their claimed patent. Second, Toyota avers Field Hybrids' patents are unenforceable for concealment of the best mode. For the reasons set forth below, Toyota's Motions for Summary Judgment are granted.

II. BACKGROUND¹

Toyota's Motions focus on two sets of facts related to the litigation. Thus, each factual background will be set forth separately. The patents at issue both relate to the development of hybrid engines for use in automobiles.

A. Abandonment and Revival of the 288 Application

Field Hybrids has asserted patent claims based on two patents: U.S. Patent Nos. 6,481,516 B1 ("516 Patent") and 6,668,954 B2 ("954 Patent"). The 516 and 954 Patents stem from two applications in a chain of continuation and continuation-in-part applications. Plaintiff claims the 516 and 954 Patents are therefore entitled to a filing date of May 8, 1992 (based on Application No. 07/880,967 ("967 Application")) or September 21, 1992 (Application No. 07/948,288 ("288 Application")).

The 288 Application was filed by Bruce Field ("Field"). O'Meara Decl. II [Docket No. 142] Ex. 1 at T0000469-72. The application was prosecuted by attorneys Norman and Paul Friederichs. *Id.* The Friederichs practiced with the Kinney & Lange firm prior to forming the Friederichs Law Firm. During the prosecution of the 288 Application, an Office Action was issued by the U.S. Patent and Trademark Office ("PTO") on October 17, 1994, and sent to the Friederichs Law Firm. O'Meara Decl. II Ex. 8. The Office Action rejected Field's pending

¹ For purposes of the instant Motion, the facts are viewed in the light most favorable to Plaintiff, the non-moving party. *See Ludwig v. Anderson*, 54 F.3d 465, 470 (8th Cir. 1995).

claims, but the statutory three-month period (extendible to six months) was available for a response from the applicant. Id.; 35 U.S.C. § 133. Therefore, including the extension, a response to the Office Action was due on April 17, 1995. Id. Field failed to file a response by this date. O’Meara Decl. II Ex. 14. The PTO confirmed the abandonment of the 288 Application in a letter dated May 16, 1995 to the Friederichs Law Firm. Id.

Norman and Paul Friederichs have both testified they discussed with Field and Stephen Adler (“Adler”) the need to respond to the Office Action to avoid abandonment of the 288 Application, and, following abandonment, the need to revive the 288 Application. O’Meara Decl. II Ex. 16 at 55-64; Ex. 17 at 152-76, 217-24, 255, 257-58, 274-77, 281-82. Norman Friederichs additionally testified that Field and Adler had not paid their legal bills. As a result, the Friederichs Law Firm allowed the Office Action response time window to close. O’Meara Decl. II Ex. 16 at 58-59, 63-64.

Letters exchanged between the Friederichs, Field, and Adler also document that all parties were aware of the impending deadlines regarding the Office Action. A March 6, 1995 letter from Paul Friederichs to Field stated: “We would like to have [our legal fees] paid before we proceed further on these applications. Please note that we must respond on these applications quickly in order to avoid abandonment.” O’Meara Decl. II Ex. 18. A reply letter from Field, dated March 16, 1995, requests Friederichs to “proceed no further with [the 967 application] at this point.”² O’Meara Decl. II Ex. 19. In contrast, Field and Adler claim no recollection of discussions with the Friederichs regarding abandonment. O’Meara Decl. II Ex. 4 at 820-21; Ex.

² The 967 Application also was abandoned in 1995, however, no work was ever done to revive that application. Although Plaintiff claims Adler’s letter instructing the Friederichs to cease work on the 967 Application is evidence that Plaintiff did not want work stopped on the 288 Application, it is better evidence of Field and Adler’s awareness of the patent process.

5 at 281-83; Ex. 34 at 172-75.

On January 18, 1996, the Friederichs filed a petition on behalf of Field seeking to revive the 288 Application. O’Meara Decl. II Ex. 1 at T0000553-65; Ex. 17 at 172-75. Additionally, an amendment in response to the Office Action was filed. O’Meara Decl. II Ex. 1 at T0000553-65. The petition claimed the delayed response to the Office Action was unintentional, although it did not detail the circumstances regarding the fee disputes between Field, Adler, and the Friederichs Law Firm. Id. at T0000563-64. The petition to revive was dismissed on February 29, 1996, when the PTO determined the response to the Office Action was not appropriate because it lacked a “proposed response to continue prosecution of the abandoned application, or filing of a continuation application.” Id. at T0000566-67.

Following the dismissal of the first petition to revive, the Friederichs attempted another revival on behalf of Field. This petition was filed on August 29, 1996, and included a continuing application bearing the number 08/705,001 (“001 Application”). O’Meara Decl. II Ex. 1 at T0000570-71; Ex. 17 at 176-80, 185. Again, this petition claimed the delay in response time was unintentional. The petition was granted on November 7, 1996. O’Meara Decl. II Ex. 1 at T0000573-74. The revival provided co-pendency between the 288 and 001 Applications. Id. Field then continued to prosecute patents based on the 001 Application. O’Meara Decl. II Ex. 17 at 186. Ultimately, the 516 and 954 Patents were issued based on this application chain. O’Meara Decl. II Exs. 2, 42.

B. Best Mode

1. The 516 and 954 Patents

The 516 and 954 Patents describe hybrid engines with “series-parallel functionality.” O’Meara Decl. I [Docket No. 135] Ex. 1 at cols. 1, 3; Ex. 2 at cols. 1, 3. This new type of hybrid

engine improved upon the “series hybrids” and “parallel hybrids,” which suffered from inefficient engines or batteries which ran the risk of energy depletion. O’Meara Decl. I Ex. 1 at col. 1; Ex. 2 at cols. 1-2. The series-parallel hybrid, however, solved these problems by using an alternator, normally used to power low voltage batteries, to provide high voltage output to the hybrid engine’s high voltage battery pack. Id. Typically, alternators are regulated to output of approximately fourteen volts. O’Meara Decl. I Ex. 1 at cols. 1-3. The 516 Patent, however, claims an average alternator can produce as much as 150 volts. Id.

For purposes of this Motion, the technical differences between the 516 and 954 Patents will not be discussed. Although the two patents are technically distinct, the differences are not relevant to the instant Motion. Importantly, both patents disclose the same three embodiments. All of the embodiments contain an electric motor (16), a battery pack to power the electric motor (18), an accessory battery (30), an internal combustion engine (24), and an alternator (28). O’Meara Decl. I Ex. 1 at cols. 3-7; Ex. 2 at cols. 4-8. The electric motor (16) and engine (24) combine to drive the car’s wheels. Id.

The alternator (28) (“alternator”) is the focal point of this Motion. According to the Patents, the alternator is connected to the engine’s drive shaft, and generates electricity to charge a battery. In the embodiments of Figures 1 and 3 (“Fig. 1” and “Fig. 3”), the alternator can connect to either the battery pack (18) or the accessory battery (30) through use of a switching mechanism (32). O’Meara Decl. I Ex. 1 at cols. 2, 5-6, Figs. 1, 3; Ex. 2 at cols. 2, 6-7, Figs. 1, 3. When the accessory battery (30) is fully charged, a process controller (22) directs the switching mechanism (32) to direct the output of the alternator to the battery pack (18). Id. Finally, the process controller (22) regulates the voltage output of the alternator, depending on whether the alternator is charging the battery pack (18) or the accessory battery (30). Id.

The Fig. 2 embodiment differs from Figs. 1 and 3. This embodiment does not have the process controller (22) or switching mechanism (32). O'Meara Decl. I Ex. 1 at cols. 6-7; Ex. 2 at col. 7. Rather, the alternator output is always directed at the battery pack (18) at a constant voltage. Id. A voltage reducer (36) is also connected to the alternator and to the accessory battery (30) to ensure the accessory battery (30) receives the correct voltage. Id. The 954 Patent refers to Fig. 2 as the preferred embodiment. O'Meara Decl. I Ex. 2 at col. 8. The 516 and 954 Patents both state that any series or parallel hybrid can use the Fig. 2 embodiment, because a "high voltage alternator can be placed (or may already exist) in the vehicle." O'Meara Decl. I Ex. 1 at col. 7; Ex. 2 at col. 8.

Preferred embodiments of many of the components are specified in Fig. 1. Preferred engines (24) and electric motors (16) are specified. O'Meara Decl. I Ex. 1 at col. 4; Ex. 2 at cols. 4-5. The preferred alternator would be capable of "high current/high voltage output, ranging from but not limited to, approximately 10 volts to an excess of 150 volts" and have "a voltage output of approximately 14-volts when charging the accessory battery 30 and a voltage output of approximately 90-volts when charging the battery pack 18." O'Meara Decl. I Ex. 1 at cols. 4-6; Ex. 2 at cols. 4-7. The patents name the Motorola 150A alternator DC power unit as the only example of such an alternator. Id.

2. The Alternator

Field initially built a parallel electric hybrid vehicle in 1990. However, that vehicle suffered from the typical parallel hybrid malady. At slow speeds, the high voltage battery pack could not maintain a charge. O'Meara Decl. I Ex. 8 at 164-67; Ex. 9; Ex. 10 at 193-201, 217-18. By late 1991, Field had implemented the switching mechanism described in embodiment 1, including the disclosed Motorola alternator. The Motorola alternator, as manufactured, soon

proved inadequate. During testing of the hybrid vehicle, the alternator's standard diodes became overloaded and blew out. O'Meara Decl. I Ex. 9; Ex. 10 at 225-34.

Field's solution to the problem was to modify the vehicle to produce the Fig. 2 embodiment. Instead of using the Motorola alternator, Field switched to a Model A151 Niehoff alternator, which he modified to include high voltage diodes, which avoided the issue encountered with the Motorola alternator. Field switched to the Niehoff alternator because it was "much easier to modify," and he therefore preferred the Niehoff to the Motorola alternator. O'Meara Decl. I Ex. 9; Ex. 10 at 232-36, 271-72. The Fig. 2 embodiment, with the Niehoff alternator, was tested in January 1992. Id. This embodiment contained all of the claims asserted against Toyota. Following this test, no modifications were made to the alternator. Id. Field drove the car to and from work following this test. Id.

Plaintiff in this case asserts 516 Patent claims 23-26 and 30-34, as well as 954 Patent claims 1, 3, and 4. Statement of Intrinsic and Extrinsic Evidence Supporting Claim Construction at 52-67. These claims are directed to the Fig. 2 embodiment. 516 Patent claims 23 and 31 each name the "second motor/generator," or alternator, and discuss its connection between the engine, battery pack, and accessory battery. 954 Patent Claim 1 names the "electrical energy generator," or alternator, and similarly discusses the connection between the alternator, battery pack, and accessory battery.

III. DISCUSSION

A. Summary Judgment Standard

Federal Rule of Civil Procedure 56(c) provides that summary judgment shall issue "if the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving

party is entitled to judgment as a matter of law.” Fed. R. Civ. P. 56(c); see Matsushita Elec. Indus. Co., Ltd. v. Zenith Radio Corp., 475 U.S. 574, 587 (1986); Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 252 (1986); Celotex Corp. v. Catrett, 477 U.S. 317, 323 (1986). On a motion for summary judgment, the Court views the evidence in the light most favorable to the nonmoving party. Ludwig v. Anderson, 54 F.3d 465, 470 (8th Cir. 1995). The nonmoving party may not “rest on mere allegations or denials, but must demonstrate on the record the existence of specific facts which create a genuine issue for trial.” Krenik v. County of Le Sueur, 47 F.3d 953, 957 (8th Cir. 1995).

B. Motion for Summary Judgment Based on the Abandonment of Patent Applications and Anticipation by Prior Publication and Public Use

1. Abandonment of the 288 Application

Defendants’ first Motion for Summary Judgment is based on the purported abandonment of the 288 Application. The 288 Application is one in a chain of applications dating back to 1992 that ultimately resulted in the issuance of the 516 and 954 Patents. This issue is of crucial importance, because if the 288 Application was indeed abandoned, the 516 and 954 Patents are not entitled to filing dates preceding August 29, 1996.³ If the 288 Application was not abandoned, the 516 and 954 Patents are entitled to filing dates of September 21, 1992.⁴

The original filing date of the 516 and 954 Patents is of paramount importance to Defendants’ Motion because if the 516 and 954 Patents are not entitled to a filing date earlier than August 29, 1996, the Patents must be found invalid based on anticipation by prior publication and public use.

³ Defendants argue that, for various reasons, the 516 and 954 Patents are not even entitled to a filing date as early as August 29, 1996. However, as will be discussed, a filing date of August 29, 1996 renders Plaintiff’s claims invalid.

⁴ The 288 Application was originally filed on September 21, 1992.

The standard of review for a District Court in reviewing a decision of the PTO is whether the decision was “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with the law.” 5 U.S.C. § 706(2)(A); Kim v. Quigg, 718 F. Supp. 1280, 1281 (E.D. Va. 1989).

Defendants argue Plaintiff abandoned the 288 Application when it failed to respond to the October 17, 1994 Office Action issued by the PTO. Following the issuance of an Office Action, a patent applicant has three months to respond, or risk abandoning his patent. PTO Manual of Patent Examining Procedures (“MPEP”) § 711.04(a) (Sixth Ed.).⁵ This time window can be extended to six months, if a fee is paid prior to the expiration of the three month deadline. Id. However, should the applicant miss these deadlines, the patent application will be declared abandoned. In this instance, Plaintiff did not respond to the Office Action within the three or six month time frame. As a result, the 288 Application was abandoned on January 17, 1995. O’Meara Decl. II Exs. 12, 13.

Following the abandonment of the 288 Application, Plaintiff attempted to revive the application a full year later in January 1996. This petition to revive claimed Plaintiff’s delay in responding to the Office Action was “unavoidable” or “unintentional.” O’Meara Decl. II Ex. 37. Federal regulations allow for the reinstatement of abandoned applications upon demonstration that the delay was unavoidable or unintentional. 37 C.F.R. § 1.137. Although this petition to revive the 288 Application was denied, Plaintiff’s second petition to revive was granted on November 7, 1996. As a result, continuity was retained among the applications, and based on this continuity, the 516 and 954 Patents have been treated as if they are entitled to a filing date of September 21, 1992.

⁵ Although the MPEP has been updated since the Sixth Edition, this was the edition available in 1995-96, and is therefore applicable to this determination.

Defendants rest their argument for invalidity on the grounds that Plaintiff, in its attempts to revive the 288 Application, falsely claimed the delay in responding to the Office Action was unavoidable or unintentional. Defendants contend, in fact, that Plaintiff's delay was fully intentional, and that Plaintiff and Plaintiff's counsel were both aware of the Office Action deadlines, and understood those deadlines were missed. In support of their position, Defendants cite the deposition testimony of the Friederichs, who both testified the reason for the delay was not a lack of awareness of the filing deadlines on behalf of themselves or their clients. O'Meara Decl. II Ex. 17 at 145, 152-53, 161-67, 172-76. Rather, the Friederichs explained the delay was caused by Field and Adler's failure to pay their legal bills. O'Meara Decl. II Ex.16 at 58-64, 70-71; Ex. 17 at 220-24.

A series of communications between the Friederichs Law Firm and Field and Adler evidences the fee dispute. Notably, a March 6, 1995 (a time still within the six month extension period) letter from Paul Friederichs to Field stated: "We would like to have [our legal fees] paid before we proceed further on these applications. Please note that we must respond on these applications quickly in order to avoid abandonment." O'Meara Decl. II Ex. 18. This letter not only shows Friederichs' awareness of the Office Action deadlines, but also puts Field on notice that a quick response time was necessary to avoid potentially abandoning the patent applications. Despite the warnings, a reply letter from Field, dated March 16, 1995, requests Friederichs to "proceed no further with [the 967 application] at this point." O'Meara Decl. II Ex. 19. The letter does not mention the 288 Application. Additionally, Adler sent a letter to the Friederichs Law Firm accepting responsibility for delays. O'Meara Decl. II Ex. 20.

Plaintiff attempts to rebut these allegations by arguing there was no intent to abandon the applications on behalf of Field and Adler, and relies on communications regarding the fee

dispute between Field Hybrids and the Friederichs Law Firm. Field and Adler also claim they do not recall ever being warned the 288 Application was in danger of being abandoned, despite letters and testimony from the Friederichs stating the contrary. Index I [Docket No. 177] Ex. F at ¶ 8; Ex. G at 819-21. Plaintiff further cites the absence of a record of the Friederichs Law Firm forwarding the Notice of Abandonment to Plaintiff as evidence that Plaintiff was unaware the 288 Application was abandoned. Index I Ex. J at 359-61, Ex. Q at 71. Plaintiff suggests perhaps the Friederichs' docketing system contributed to the lack of notification. Finally, Field and Adler aver they had no knowledge the 288 Application was subject to the Office Action in late 1995 and was abandoned in January 1996. Index I Ex. G at 819-20; Ex. K at 302-07, 311-14; Ex. M at ¶¶ 12-14.

37 C.F.R. § 1.137(b) allows for revival “[i]f the delay in reply by applicant or patent owner was unintentional.” The MPEP further explains the purpose of the unintentional abandonment rule:

[The rule] is permissive in the sense that it does not require a showing of unavoidable delay and does not require a terminal disclaimer, but it is not meant to encourage delay The Office has amended [the rule] to require applicant to state that the delay was unintentional, rather than the abandonment was unintentional.

MPEP § 711.03(c) (Sixth Ed.). Later versions of the MPEP expound on the unintentional abandonment rule:

A delay resulting from a deliberately chosen course of action on the part of the applicant is not an “unintentional” delay within the meaning of [the rule] A delay resulting from a deliberately chosen course of action on the part of the applicant does not become an “unintentional” delay within the meaning of [the rule] because . . . the applicant remains interested in eventually obtaining a patent, but simply seeks to defer patent fees and patent prosecution expenses Likewise, a change in circumstances that occurred subsequent to the abandonment of an application does not render “unintentional” the delay resulting from a previous deliberate decision to permit an application to be abandoned. These matters simply confuse the question of whether there was a deliberate decision not to continue the prosecution of an application with why there was a deliberate

decision not to continue the prosecution of an application.

MPEP § 711.03(c) (Eighth Ed.). As the MPEP clarifies, whether one intends to abandon an application is irrelevant. The pertinent inquiry, rather, is whether the delay was intentional. Thus, a course of conduct resulting in delay that is purposefully chosen does not qualify as an unintentional delay.

Here, it is undisputed that the Friederichs were mindful of the Office Action response time deadlines. Courts have imputed the knowledge of patent lawyers to patent applicants. See In re Kokaji, 2 U.S.P.Q.2d 1309, 1311 (Com'r Pat & Trademarks 1987). Plaintiff, however, argues the Friederichs did not pass on the results of the Office Action until late 1995. However, beyond Field and Adler's bare assertions, there is no evidence to support this contention. Letters from the Friederichs Law Firm indicate the applications at issue are in danger of becoming abandoned. O'Meara Decl. II Ex. 18. The letters state the Friederichs would not work on the file without further payment from Plaintiff.⁶ The communications between Plaintiff and the Friederichs frequently discuss the need for urgency in attending to the patent applications, yet Plaintiff insists the Friederichs did not make it aware of important deadlines. Additionally, the Friederichs both testified that they orally informed Plaintiff of the response time deadlines to the Office Action. Plaintiff's only evidence to rebut the Friederichs' contentions is the deposition testimony and affidavits filed by Field and Adler in response to Defendants' motion, claiming they do not recall ever being told of any risk of abandonment by the Friederichs. Plaintiff also suggests the possibility that an error occurred in the Friederichs Law Firm docketing system. Plaintiff proffers no evidence, however, beyond an incomplete record of the Friederichs Law

⁶ Although Plaintiff goes to great lengths to explain the fee dispute between it and the Friederichs Law Firm, the nature of the dispute is irrelevant to this inquiry.

Firm docket, to support this contention.

Plaintiff also argues it had no intention of abandoning the 288 Application, and would have chosen a different course of action had it been aware of the potential abandonment. As the MPEP makes clear, this is not a valid consideration in determining whether a delay is unintentional. The inquiry is directed only to whether the course of action resulting in the delay was intentional. Here, the Court finds the delay was intentional. The communications between the Friederichs Law Firm and Plaintiff indicate the fact that the patent applications are in danger of being abandoned. Although Plaintiff may not have intended to abandon the applications, it did nothing to prevent the delay resulting in the abandonment. Moreover, other than its bare assertions that it was unaware of the potential for abandonment, Plaintiff has proffered no evidence to support this averment. As a result, no material question of fact exists as to the fact that Plaintiff's delay was intentional.

Even if Plaintiff could demonstrate it had no knowledge that the patent applications were abandoned until late 1995, it does not explain Plaintiff's dawdling in attempting to revive the petitions. The first petition to revive was filed on January 18, 1996 – the last day available to Plaintiff to file a petition to revive. As the 1995 version of the MPEP states:

A person seeking revival should not make a statement that the delay was unintentional unless the entire delay, including the delay from the date it was discovered that the application was abandoned up until the petition to revive was actually filed, was unintentional. For example, a statement that the delay was unintentional would not be proper when an applicant becomes aware of an abandonment and then intentionally delays filing a petition to revive the application under [the rule].

MPEP § 711.03(c) (Sixth Ed.). When the January 1996 petition was denied for procedural reasons in February 1996, the second petition to revive was not filed for another six months, on August 29, 1996. Plaintiff makes no attempt to explain the delay between the time it first

discovered the abandonment and the first petition to revive, nor the delay between the denial of the first petition and the filing of the second petition. Therefore, even if Plaintiff could demonstrate a factual dispute as to when it learned of the potential for or actual abandonment of the 288 Application, there is no dispute that a purposeful delay occurred between the discovery by Plaintiff of the abandonment and the filing of the petitions to revive. This delay alone is sufficient enough to warrant a finding that Plaintiff's revival was an abuse of discretion, and therefore subject to being overturned.⁷ 5 U.S.C. § 706(2)(A).

2. Invalidity of Patents Under 35 U.S.C. § 102(b) and Public Use of the Prototype Vehicle

Because the 288 Application was not properly revived, its abandonment date is January 17, 1995. 35 U.S.C. § 133; O'Meara Decl. II Exs. 12, 13. The next application in the chain resulting in the 516 and 954 Patents was Application No. 08/705,001 ("001 Application"), filed on August 29, 1996. Given the twenty month gap between the applications, co-pendency is not met between the 288 and 001 Application under the criteria of 35 U.S.C. § 120. Accordingly, the 516 and 954 Patents are entitled to a filing date of August 29, 1996.

Based on this filing date, Defendants contend the 516 and 954 Patents are invalid under 35 U.S.C. § 102(b) as anticipated by Field's own prior art. 35 U.S.C. § 102(b) provides:

A person shall be entitled to a patent unless –

(b) the invention was . . . described in a printed publication in this or a foreign country . . . more than one year prior to the date of the application for patent in the United States

⁷ Defendants additionally argue that Field, and by extension, Plaintiff, did not own the rights to the 288 Application. Defendants contend Field, in the early 1990s, transferred all his rights to the 288 Application to United Power Corporation. This issue was discussed in this Court's Order denying Defendants' Motion to Dismiss, issued on November 15, 2004 [Docket No. 182]. There, the Court found the assignment referenced by Defendants did not transfer the rights in the Patents to United Power Corporation.

Moreover, it is irrelevant whether the referenced “printed publication” (a document disseminated to the interested public) was authored by the inventor or by another person. See, e.g., In re Klopfenstein, 380 F.3d 1345, 1347-50 (Fed. Cir. 2004).

On May 7, 1993, Field filed International Patent Application No. PCT/US93/04378 under the Patent Cooperation Treaty (“PCT”). O’Meara Decl. II Ex. 41. The application included PCT Publication No. WO 93/23263, which contained the same disclosures as Field’s 967, 288, and 001 Applications. Id. Because the 516 and 954 Patents are not entitled to a filing date prior to August 29, 1996, the PCT publication preceded the Patents by nearly three years. Consequently, the 516 and 954 Patents were anticipated by International Publication No. WO 93/23263, and are therefore invalid. Constant v. Advanced Micro-Drivers, Inc., 848 F.2d 1560, 1567-69 (Fed. Cir. 1988).

Additionally, Defendants aver the 516 and 954 Patents are invalid because Plaintiff publically used the invention more than a year prior to the date of application. Under 35 U.S.C. § 102(b):

A person shall be entitled to a patent unless –

(b) the invention was . . . in public use . . . in this country, more than one year prior to the date of the application for patent in the United States

Like anticipation by publication, the public use may be by the inventor or another person.

Netscape Communications Corp. v. Konrad, 295 F.3d 1315, 1320-23 (Fed. Cir. 2002). Public use does not require that the actual workings of the invention be visible. See, e.g., New Railhead Mfg., L.L.C. v. Vermeer Mfg. Co., 298 F.3d 1290, 1297-99 (Fed. Cir. 2002). Although an “experimental use exception” exists to the public use doctrine, the experimental use ends when the invention is reduced to practice. EZ Dock, Inc. v. Schafer Sys., Inc., 276 F.3d 1347, 1353

(Fed. Cir. 2002).

Plaintiff has admitted the hybrid vehicle that is the subject of the 516 and 954 Patents was reduced to practice by January 19, 1992. O'Meara Decl. II Ex. 43. Additionally, Field publically demonstrated the vehicle in June 1992. O'Meara Decl. II Ex. 5 at 630-31. Plaintiff also admitted that Field drove the prototype on a limited basis following tests in Lavonia, Michigan, in 1993. O'Meara Decl. II Ex. 44. Because the invention described in the 516 and 954 Patents was reduced to practice long before the filing date of August 29, 1996, the Patents are invalid under 35 U.S.C. § 102(b). New Railhead Mfg., L.L.C., 298 F.3d at 1297-99.

3. Inequitable Conduct

Toyota additionally argues the 516 and 954 Patents are invalid based on the inequitable conduct of attorney Paul Friederichs in representing the delay in seeking revival was unintentional. As Plaintiff correctly notes, to prevail on such a claim, Defendants must demonstrate Friederichs made a material, false statement to the PTO, and that the statement was made with the specific intent to deceive. Monsanto Co. v. Bayer Bioscience N.V., 363 F.3d 1235, 1239-41 (Fed. Cir. 2004). Defendants argue statements made by Friederichs in the petitions to revive were intentionally deceiving. Intent, however, is generally a complex factual inquiry that requires judgment as to the credibility of the witnesses. Id. In the petition for revival, Friederichs simply used the standard language required by federal regulations. Consequently, the Court determines insufficient evidence has been presented to find Friederichs intentionally deceived the PTO.

C. Motion for Summary Judgment Based On Concealment of the Best Mode

Defendants' second Motion for Summary Judgment is based on Plaintiff's failure to disclose the best mode for carrying out the invention. Patent law requires an inventor to "set

forth the best mode contemplated by the inventor for carrying out his invention.” 35 U.S.C.

§ 112. A two factor test is employed to determine whether the best mode requirement has been satisfied: first, whether the inventor had a best mode for practicing the invention at the time of filing, and two, whether the written description of the invention disclosed the best mode so that one reasonably skilled in the art could practice it. Chemcast Corp. v. Arco Indus. Corp., 913 F.2d 923, 927-28 (Fed. Cir. 1990). However, a patentee cannot rely on the level of skill in the art to justify the absence of disclosure of the best mode. Bayer AG v. Schein Pharmaceuticals, Inc., 301 F.3d 1306, 1314 (Fed. Cir. 2002). The first factor is a subjective inquiry that focuses on what the inventor actually knew at the time the application was filed. U.S. Gypsum Co. v. Nat'l Gypsum Co., 74 F.3d 1209, 1212 (Fed. Cir. 1996). A patent may be found invalid based on a best mode violation at the summary judgment stage. Id. at 1216.

Defendants argue Plaintiff's failure to disclose that he preferred and was in fact using the Niehoff alternator as opposed to the Motorola alternator disclosed in his patent applications was a best mode violation. It is undisputed that Field began using the Niehoff alternator, as opposed to the Motorola alternator, prior to the filing of the 967 Application in May 1992.⁸ In the 967 Application, however, Field specifically disclosed the Motorola alternator as an acceptable alternator. However, Field had previously discovered that standard alternators had to be retrofitted with high voltage diodes to eliminate the risk of overloading the standard diodes. During this process, Field also discovered the Niehoff alternator was easier to modify in this regard than the Motorola alternator, stating he preferred the Niehoff to the Motorola alternator.

⁸ As discussed supra, the 516 and 954 Patents are not entitled to a filing date earlier than August 29, 1996. The 967 Application, the earliest in the chain of applications which ultimately led to the filing of the 516 and 954 Patents, is May 8, 1992. Neither date changes the result of the Motion for Summary Judgment premised on a best mode defense.

O'Meara Decl. I Ex. 9; Ex. 10 at 232-36, 271-72. Moreover, Field was aware that other alternators existed which did not require modification. He neglected, however, to disclose either the Niehoff alternator or his method for modifying it in the patent applications.

The alternator is an integral part of the hybrid vehicle described in the 516 and 954 Patents. In fact, the use of the alternator to power both the accessory battery and the high voltage battery pack in the 516 and 954 Patents represents a significant improvement over previous hybrid designs. Each of Plaintiff's asserted claims against Defendants names an element corresponding to the alternator.⁹ Because Field failed to disclose his preference for the Niehoff alternator and his method for modifying the alternator, Defendants argue the Patents should be held invalid for violation of the best mode requirement of 35 U.S.C. § 112.

Plaintiff argues Defendants have failed to proffer clear and convincing evidence that the Patents are invalid based on a best mode violation. Young Dental Mfg. Co., Inc. v. Q3 Special Prods., Inc., 112 F.3d 1137, 1144 (Fed. Cir. 1997). Although there is no genuine issue of material fact, Plaintiff counters the best mode defense by raising three issues about the conclusions to be drawn from the undisputed facts.

First, Plaintiff argues Field did not express a subjective preference for the Niehoff alternator because it made his invention perform better. Plaintiff contends the Niehoff did not function better than the Motorola – he simply preferred it because it was easier to modify. Plaintiff contends this preference in the manufacturing process for a certain brand of alternator does not improve the invention; rather, it was simply the inventor's "selection of specific steps and materials over others." Wahl Instruments, Inc. v. Acvious, Inc., 950 F.2d 1575, 1581 (Fed.

⁹ The alternator is variously titled the "second motor/generator," "alternator," or the "electrical energy generator" in the claims asserted by Plaintiff.

Cir. 1991). According to Plaintiff, Field used the Niehoff alternator because it was readily available to him and easier to modify, not because it improved the quality of the invention.

Defendants refute these arguments, noting that the Patents stress the importance of the use of a vehicle alternator to the 516 and 954 Patents. In fact, the patents discuss how the use of a standard vehicle alternator can overcome the flaws of previous hybrids “without significantly increasing the bulk or cost of the base parallel systems.” O’Meara Decl. I Ex. 1 at cols. 2-3, 7; Ex. 2 at Cols. 2-3, 8. Therefore, the alternator is a key component of the Patent, and the precise use of the alternator is of critical importance. Defendants argue the Patents did not disclose either the Niehoff alternator or the method for modifying the alternator for use in the invention.

Defendants also rely on the case of Spectra-Physics, Inc., v. Coherent, Inc., 827 F.2d 1524 (Fed. Cir. 1987) in support of their argument. In Spectra-Physics, the patent at issue involved an improved laser discharge tube. The asserted claim included the means for attaching copper cups to the inside wall of a ceramic tube. Id. at 1528. While brazing with an alloy called TiCuSil was disclosed as the preferred method, the six stage method for the brazing process developed by the inventor was not disclosed. The Court recognized the patent could be practiced without knowledge of the six stage brazing process; however, the patent did not disclose the best mode for practicing the invention. Id. at 1537. Ultimately, the Federal Circuit ruled the best mode requirement had been violated, noting the “complete lack of detail” was fatal to the patent. Id.

This Court finds the case at bar analogous to Spectra-Physics. Here, the alternator is a key portion of the 516 and 954 Patent claims. Field failed to disclose not only the Niehoff alternator, but also the method for modifying the alternator for use in the hybrid vehicle. Without the modifications, it is undisputed the alternator would not be able to deliver the high

voltage charge needed to properly power the hybrid vehicle. Given the importance of the use of a standard alternator to the Patents, Plaintiff cannot now be heard to claim the lack of detail regarding the required modification to the disclosed alternator is of limited importance. As a result, the 516 and 954 Patents have violated the best mode requirement.

Plaintiff next argues the selection of the modified Niehoff alternator was a routine production detail not subject to the best mode requirement. As noted by Plaintiff, not every production detail must be disclosed; rather, “an inventor need only disclose information about the best mode that would not have been apparent to one of ordinary skill in the art.” Young Dental Mfg., 112 F.3d at 1144. Plaintiff suggests the choice of an alternator is a routine production detail that need not be disclosed. Plaintiff points to Field’s testimony that an ordinary person skilled in the art would know virtually any standard automobile alternator could achieve the same results as the Motorola or Niehoff alternator. Moreover, Plaintiff cites expert testimony that a skilled artisan could easily modify a standard alternator or purchase a high voltage alternator to employ in the hybrid vehicle. Index I Ex. C at 6-8.

Defendants counter that the choice of alternator is hardly a routine choice. The alternator is a claimed feature and key component of the Patents at issue. Furthermore, Field’s admitted preference for the Niehoff alternator because of its ease of modification demonstrates the choice of alternator is not a routine detail. Finally, Defendants aver the expert testimony submitted by Plaintiff is not controlling of the issue. Defendants cite Dana Corp. v. IPC Ltd. P’ship for the holding that “[t]he best mode requirement is not satisfied by reference to the level of skill in the art, but entails a comparison of the facts known to the inventor regarding the invention at the time the application was filed and the disclosure in the specification.” 860 F.2d 415, 419 (Fed. Cir. 1988).

Based on the importance of the alternator to the asserted claims, the choice of alternator and the modifications required are not routine production details. It is undisputed Field preferred the Niehoff alternator prior to the filing of the patent applications. Additionally, the application does not adequately disclose the modifications necessary for either the Motorola or Niehoff alternators. While one “skilled in the art” might discover the same modification Field found was necessary to successful operation of the hybrid vehicle with the Motorola and Niehoff alternators, it is clear this information is of vital importance to the Patents, and should have been disclosed. The choice and modification of the alternator is of critical importance to the vehicle, and cannot be a routine detail. See, e.g., Id. at 418-20.

Finally, Plaintiff contends that because 516 and 954 Patents do not claim a method for modifying the alternator as necessary for operation of the hybrid vehicle, a best mode violation could not have occurred. Plaintiff contends the best mode analysis applies only to the scope of the claimed invention, and further, the process for identifying and modifying the alternator is not claimed as part of the patent. This argument appears to be a repackaging of Plaintiff’s first two arguments, and fails for the same reasons.

In sum, the Court finds a best mode violation was committed by Plaintiff’s failure to disclose his preference for and method for modifying the Niehoff alternator. As a result, the 516 and 954 Patents are invalid on these grounds. Although Defendants also request a finding of invalidity based on Field’s alleged deliberate intent to deceive the PTO, Defendants do not offer evidence of Field’s specific intent to deceive, and judgment is not found for Defendants on this point. In Re Hayes Microcomputer Prods, Inc. Patent Litigation, 982 F.2d 1527, 1546 (Fed. Cir. 1992).

IV. CONCLUSION

Based on the foregoing, and all the files, records and proceedings herein, **IT IS**
HEREBY ORDERED that:

1. Defendants' Motions for Summary Judgment [Docket Nos. 132 and 139] are
GRANTED, and
2. Plaintiff's Complaint [Docket No. 1] is **DISMISSED WITH PREJUDICE**.

BY THE COURT:

s/Ann D. Montgomery
ANN D. MONTGOMERY
U.S. DISTRICT JUDGE

Dated: January 27, 2005.